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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,954	03/14/2005	Daniel Husler	WLAN.P-002	2351
57380	7590	01/11/2008		
Oppedahl Patent Law Firm LLC P.O. BOX 4850 FRISCO, CO 80443-4850			EXAMINER MUSSEY, BARBARA J	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			01/11/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket-oppedahl@oppedahl.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,954	<b>Applicant(s)</b> HUSLER ET AL.	
	<b>Examiner</b> Barbara J. Musser	<b>Art Unit</b> 1791	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/14/05, 7/27/06, 8/1/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear what is meant by melting the tapes "open" in line 4. It is unclear in line 6, what range is encompassed by "short time" and "high heat transfer". It is unclear in line 7 what thickness meets the claim limitation of "thin". It is unclear what is meant in line 15 by the casing being melted open again.

Regarding claim 3, it is unclear how the entire LFT pressing manufacturing process of claim 1 can be only an injection molding process as claim 1 requires it to include other steps.

Regarding claim 4, it is unclear if the LFT injection molding process of this claim is the same or in addition to that of claim 3.

Regarding claim 7, it is unclear if the profile tool of this claim is the same or in addition to that of claim 1.

Regarding claim 8, it is unclear if this claim requires more than one profile tool or if this profile forming station is in addition to that in claim 1.

Regarding claim 10, it is unclear what is meant by the CF tapes being pre-formed in plastic condition.

Regarding claim 13, it is unclear what is meant by shaping on the CF profile and LFT mass being produced for force introductions.

Regarding claim 14, it is unclear what range is encompassed by "thick". It is unclear how a compressive force zone and thrust zone differ from the normal profile formed by the process.

Regarding claim 18, it is unclear if applicant claiming the thermoplastic consists of partially crystalline polymers or consists of polypropylene, etc., or consists of partially crystalline polymers of polypropylene, etc. as the grammar is confusing and there are too many verbs present.

Regarding claim 21, it is unclear what is meant by "thermally inversely treated" as the specification does not describe what is meant by this.

Regarding claim 22, it is unclear what is included in "strong" in line 2.

Regarding claim 24, it is unclear what speed is encompassed by "strongly shock cooled".

Regarding claim 25, it is unclear how the phase transformation heat is exploited.

Regarding claim 27, it is unclear what range is encompassed by "slower" in line 2 and "lower" in line 3. It is unclear what "slower" is relative to.

Claim 29 recites the limitation "the lower tool" and "the upper tool" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 32, it is unclear what is meant by the station "with a transfer portal". It is unclear if this is in addition to the robot of claim 30 as it would appear the

purpose of the transfer portal is to move the tapes from the profile tool, but claim 30 requires the robot perform this task.

Regarding claim 34, it is unclear what is required by "shock cooled profiles".

Regarding claim 35, it is unclear what "shaping" and "position" are required as the claim states they are defined, but then does not describe them.

Regarding claim 36, it is unclear what is meant by "enhanced crystallization".

Regarding claim 37, it is unclear what is meant by "directed crystallization".

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being obvious over Kagi et al.(WO 99/52703) U.S. Patent 6,821,613 is considered an English language equivalent and all column and line numbers refer thereto.

Since the claims do not require the shock cooled skin to still exist after placement in the mold, the article of Kagi et al. meets the claim limitations since it is a CF profile bonded to an LFT mass.(Figure 1a)

Regarding claim 35, the CF tapes are located in a precise position in the LFT mass.(Figure 1a)

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being obvious over Kagi et al.(WO 99/52703) U.S. Patent 6,821,613 is considered an English language equivalent and all column and line numbers refer thereto.

Kagi et al. discloses an apparatus for forming structural components comprising a heating station(Col. 9, ll. 10-11), a profile forming station(35) which cools the tapes and therefore is capable of shock cooling(Col. 8, ll. 5-8), a transfer station(31) which transports the tape to a mold(51) wherein a molten thermoplastic is introduced.(Col. 8, ll. 5-14) Regarding the limitations of shocking cooling, pressing for a short period of time, and forming a thin casing, these are process limitations and do not materially affect the structure of the apparatus and therefore hold little patentable weight. The reference does not disclose the transporting occurs via a robot. However, the use of robots in the molding arts is well-known and conventional. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a robot to transfer the tape to a mold since such is well-known and conventional in the molding arts and since the tape is so hot that a person might be burned transporting it.

Regarding claim 31, since the tool can cool the profile but it is not desired to heat or cool the exterior, one in the art would appreciate that the interior of the tool would

have different heat transfer and specific heats from the exterior since it is not desirable to heat or cool the portions of the tool not in contact with the tapes.

Regarding claim 32, one in the art would appreciate that the robot would have tool for removing the tape from the profile.

Regarding claim 33, Kagi et al. discloses extruding the LFT mass.(Col. 4, ll. 47-48) It also discloses pressing the composite in the mold.(Col. 8, ll. 11-13) The use of IR heating with protective gas atmosphere, grippers for the robot and a control system for the various elements are well-known and conventional in the molding arts and would have been obvious for that reason.

7. Claims 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagi et al. in view of Uhlig(U.S. Patent 2,673,371).

In the event the claims require a shock cooled profile to still exist in the article, the rejection below applies to claims 34 and 35.

The article of Kagi et al. is a CF profile bonded to an LFT mass.(Figure 1a) The reference discloses the CF profile can be partially melted in the profile tool, indicating that parts of it remain unmelted and therefore these parts remain in the polymer structure they were in prior to application to the profile tool.(Col. 6, ll. 64-68) The reference does not disclose the interior of the profile having a shock cooled only partially crystalline structure. Uhlig discloses that a partially amorphous structure made by shock cooling a polymer results in a article with high tensile strength and resistance to cracking while a crystalline structure formed by slow cooling has these problems.(Col. 1, ll. 9-20) It would have been obvious to one of ordinary skill in the art at the time the

invention was made to make the CF profile originally via shock cooling so that at least part of the structure is partially amorphous (and therefore part is partially crystalline) so that the final article has high tensile strength and good resistance to cracking. (Col. 1, ll. 9-20)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



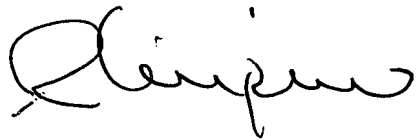
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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*BJM*

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